What Do South Carolina Builders Have to Do?

Building a home in South Carolina that is 50 percent more efficient than the 2004 Supplement to the 2003 IECC requires a systems approach – addressing the thermal envelope (insulation and fenestration) and HVAC (equipment and distribution). This level of efficiency can be achieved cost-effectively using standard building practices. If you use advanced building practices such as 2x6 construction, it's an even easier goal to reach.

The calculations cited below are based on RESNET accredited software analysis of two separate house configurations in South Carolina. For more information on how to maximize energy efficiency in a home and for links to accredited software, visit www.SimplyInsulate.com.

Modeled Homes that Meet the Requirements for New Homes Tax Credit

Columbia, SC; Zip Code 29201
House configuration:
Single family residence, 2 bedrooms
Height: 1 story
Size: 1800 sq.ft.
Foundation: Slab floors
HVAC: Gas furnace and split A/C

Charleston, SC; Zip Code 29401
House configuration:
Single family residence, 2 bedrooms
Height: 2 story
Size: 2200 sq.ft.
Foundation: Slab or raised floors
HVAC: Gas furnace and split A/C

Component		Rating
Ceiling:	Flat insulation	R-49
Wall:	Cavity insulation	R-21
	Ext. insulating sheathing	R-7.5
Foundation:	Slab edge insulation	R-0
Windows[1]:	U-factor	0.35
	SHGC	0.25
HVAC:	Furnace (AFUE)	90%
	Air conditioning (SEER)	16
Ducts:	Insulation level	R-8
	Leakage (cfm / 100 sf)	1
Envelope:	Leakage (air changes / hr.)	0.32
Energy Savings Exceed 2004 IECC by 50% or More		50%[3]
Additional Cost to Build		$4,363
After Tax Rebate		$2,363
Simple Payback to Home Buyer		10.9 yrs.

Component		Rating
Ceiling:	flat insulation	R-49
Wall:	Cavity insulation	R-21
	Ext. insulating sheathing	R-5
Floor:	insulation	R-19
Windows[2]:	U-factor	0.35
	SHGC	0.25
HVAC:	Furnace (AFUE)	90%
	Air conditioning (SEER)	15
Ducts:	Insulation level	R-8
	Leakage (cfm / 100 sf)	6
Envelope:	Leakage (air changes / hr.)	0.35
Energy Savings Exceed 2004 IECC by 50% or More		50%[3]
Additional Cost to Build		$4,833
After Tax Rebate		$2,833
Simple Payback to Home Buyer		13.2 yrs.

1 Window area is 18% of conditioned floor area
2 Window area is 16% of conditioned floor area
3 At least 10% of the energy savings is attributable to the thermal envelope

NOTES:

- *Specifications listed above are one of many packages which can be used to qualify for the federal energy efficiency tax credits.*
- *Results are based on a number of variables and are not guaranteed.*
- *Information on cost of materials is drawn from industry-standard cost estimating guides and other sources and does not necessarily represent actual costs available in the marketplace.*
- *Fuel costs used for these analyses are: electricity $0.08 / kWh, natural gas $1.38 / therm (energy cost data from US Department of Energy's Energy Information Administration)*

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For More Information, visit www.SimplyInsulate.com

Higher R-Values Mean Greater Insulating Power

PUB. NO. BI492SC 7/07

Improved Insulation Can Earn U.S. Builders a $2000 Tax Credit

Under the Federal Energy Policy Act of 2005, builders can qualify for a tax credit of $2,000 per home for improving the energy efficiency of new homes. Improving energy efficiency can be done using standard construction methods simply by improving the levels of insulation and other elements of the building envelope and enhancing major systems.

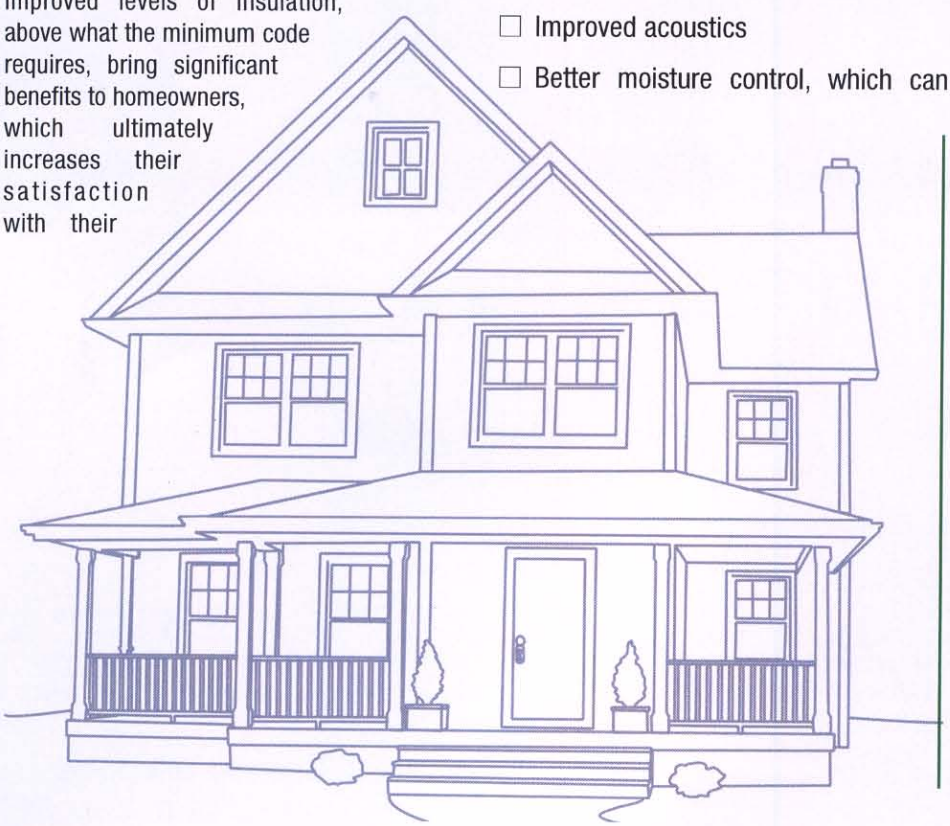
Benefits of Building Energy Efficient Homes

As home sales begin to level off, energy efficient construction can pay off big for builders. Buyers repeatedly state that they will pay more for energy efficiency if builders or realtors would simply talk to them about it. Highly efficient construction conveys an image of quality to buyers as well. There are numerous incentives for increasing the efficiency of new homes, such as rebates and even tax credits from utilities and state and federal government. (Visit www.dsireusa.org/library/includes/naima_state.cfm?state=us for detailed information). There is no better time to increase the quality of homes than with attention to an efficient building envelope that maximizes insulation.

Other Reasons to Improve Insulation Levels

With energy costs skyrocketing, there is no reason to wait for a tax incentive to increase the energy efficiency of the homes you build. Homes and buildings account for more than 40% of all energy used in the US, and the best time to address energy efficiency is when the home is constructed.

Improved levels of insulation, above what the minimum code requires, bring significant benefits to homeowners, which ultimately increases their satisfaction with their new homes and decreases callbacks for builders. In most areas of the country, insulation levels of R-49 in the ceiling and R-15 to R-21 in the walls will deliver cost-effective comfort and savings for homeowners. NAIMA's State-By-State Recommended R-Value Levels can be found at www.SimplyInsulate.com.



Quick facts on the Tax Credit:

- ❒ The energy efficiency tax credit is in effect for homes built between January 1, 2006 and December 31, 2008.
- ❒ Qualified homes will provide a level of heating and cooling at least 50 percent below the 2004 Supplement to the 2003 International Energy Conservation Code (IECC).
- ❒ The building envelope alone must provide 10 percent of the 50 percent improvement.
- ❒ The tax credit goes directly to builders who can receive credit for every home constructed that meets eligibility requirements. There is no limit to the number of homes that can qualify.
- ❒ Homes must be tested for whole-house air leakage and duct leakage by a Residential Energy Services Network (RESNET) certified rater, and the documentation, including test reports and computer analysis, must be certified by a RESNET accredited provider. (See RESNET website for directory of raters and providers.)

Visit www.SimplyInsulate.com to find out more.

Improved Insulation Levels Provide:

- ☐ Greater comfort
- ☐ More even temperature distribution
- ☐ Improved acoustics
- ☐ Better moisture control, which can reduce floor squeaks, drywall cracks, structural damage and condensation
- ☐ A more environmentally friendly home
- ☐ Lower energy bills*

If you are a builder who cares about quality, look for ways to increase the levels of insulation you put in your new homes. It's good for business, good for the homeowner and good for the environment.

Visit www.SimplyInsulate.com to find out more.

* Savings vary. Find out why in the seller's fact sheet on R-values.

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